

Date: Thursday, 19/06/2008 9:53:34 AM
 User: Julie Lecocq

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: BOLT	
Job Number	: 39947		Part Number	: D312121	
Estimate Number	: 10372		Drawing Number	: D3121 REV E	
P.O. Number	:		Project Number	: N/A	
This Issue	: 19/06/2008	S.O. No. :	Drawing Revision	: E	
Prsht Rev.	: NC		Material	:	
First Issue	: / /	Type : MACHINED PARTS	Due Date	: 30/06/2008 Qty: 100 Um: Each	
Previous Run	: 39047				
Written By	:				
Checked & Approved By	: JUL 08-6-19				
Comment	: Est. A04.02.09 New issue KJ/DS				
	: Est Rev:B ECN 1060 07-11-12 DD verified by:EC				

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :		
1.0	M303H0500	303 HEX BAR	(102)	
		Comment: Qty.: 0.0417 f(s)/Unit Total : 4.1700 f(s) 303 HEX BAR Material: AISI 303 SS 1/2" Hex Bar (M303H0.500) Batch: M107900		08/06/21
2.0	HARDINGE	HARDINGE CNC LATHE SMALL	(102)	
		Comment: HARDINGE CNC LATHE SMALL 1-Turn D3121-21 2-Identify as D3121-21 3-Deburr break all sharp edges 0.005" to 0.010"		08/06/21
3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE	(102)	
		Comment: INSPECT PARTS AS THEY COME OFF MACHINE		08/06/21
4.0	QC8	SECOND CHECK		
		Comment: SECOND CHECK		08/06/23
5.0	PACKAGING 1	PACKAGING RESOURCE #1		
		Comment: PACKAGING RESOURCE #1 Identify and Stock Location: ST b6		AS 08/06/23 x102

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 19/06/2008 9:53:34 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BOLT

Job Number: 39947

Part Number: D312121

Job Number:



Seq. #:	Machine Or Operation:	Description :
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6.0 QC21 FINAL INSPECTION/W/O RELEASE



08/06/24 JJ

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-06-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	39947
Description: Bolt	Part Number:	D3121-21
Inspection Dwg: D3121 Rev: E		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

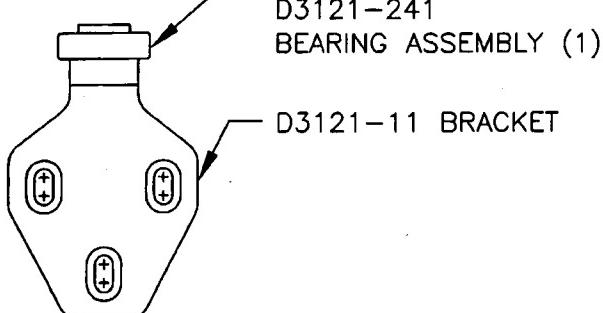
Measured by:	<u>MMF / DSR</u>	Audited by:	<u>gml</u>	Prototype Approval:	N/A
Date:	<u>08/06/21</u>	Date:	<u>08/06/22</u>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.02.27	New Issue	KJ/RF	
B	06.03.09	Dwg Rev. updated	KJ/JLM	
C	06.06.14	Dwg Rev. updated	KJ/JLM	
D	08.01.16	Dwg Rev. updated	KJ/EC/DD	DS

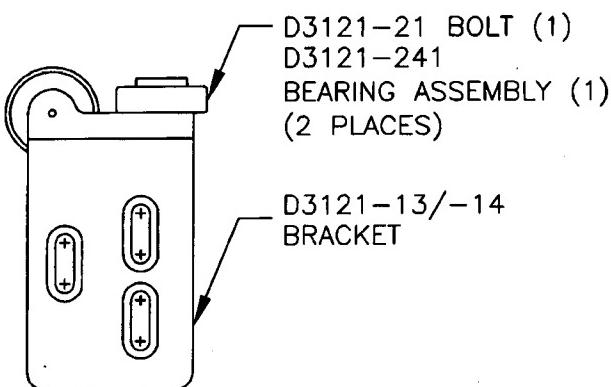
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DART

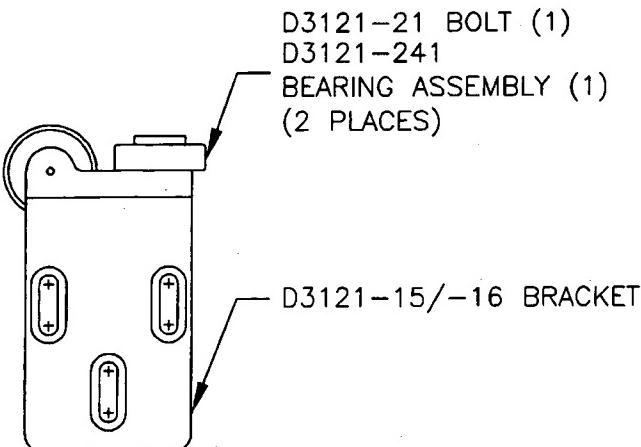
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CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3121	REV. E SHEET 1 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2
A	02.04.15	NEW ISSUE	
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146	
C	04.02.17	ADD CLEARANCE; USE -241 BEARING	
D	06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000	
E	07.11.07	ADD TOLERANCE TO 0.032 (DETAIL B)	

RELEASED
07.11.07 WJ**D3121-041 BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-33)

**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)
BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-37/-38)

**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)
BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-35/-36)

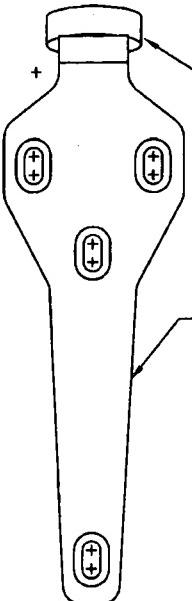
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DATE 07.11.07	TITLE BRACKET ASSEMBLY	SCALE 1:2	

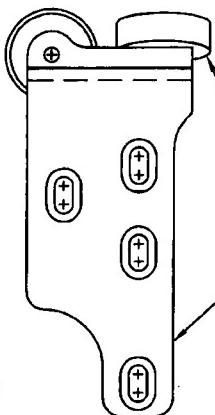


D3121-21 BOLT (1)
D3121-241
BEARING ASSEMBLY (1)

D3121-141 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23001-01)

D3121-111 BRACKET

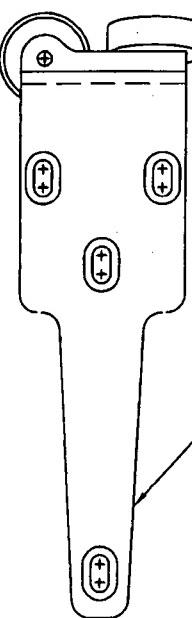
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D3121-21 BOLT (1)
D3121-241 BEARING ASSEMBLY (1)
(2 PLACES)

D3121-113/-114 BRACKET

**D3121-143 (SHOWN) / D3121-144 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-21 BOLT (1)
D3121-241 BEARING ASSEMBLY (1)
(2 PLACES)

D3121-115/-116
BRACKET

**D3121-145 (SHOWN) / D3121-146 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-05/-06)

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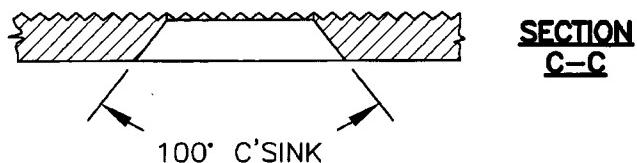
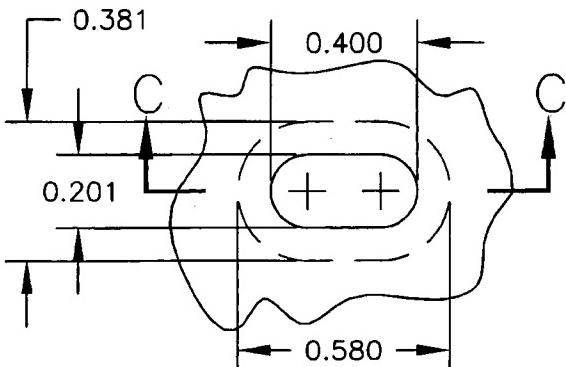
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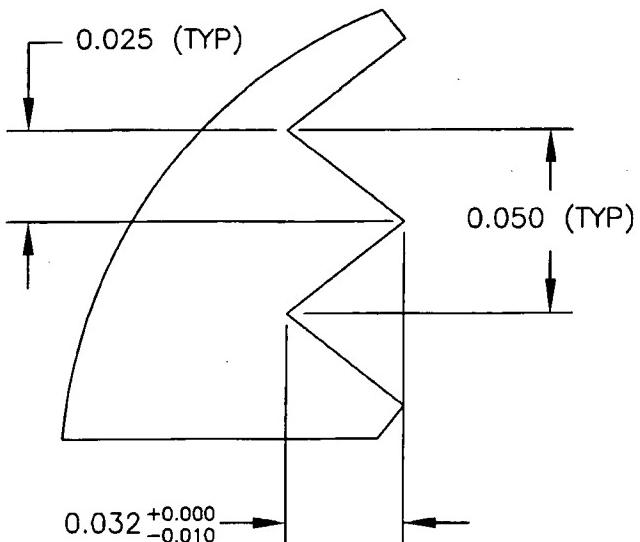
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DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:1

DETAIL A:
SLOT DETAIL
SCALE 2:1
VIEW ROTATED



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DETAIL B:
RIDGE DETAIL
PARTIAL SECTION
SCALE 1:20



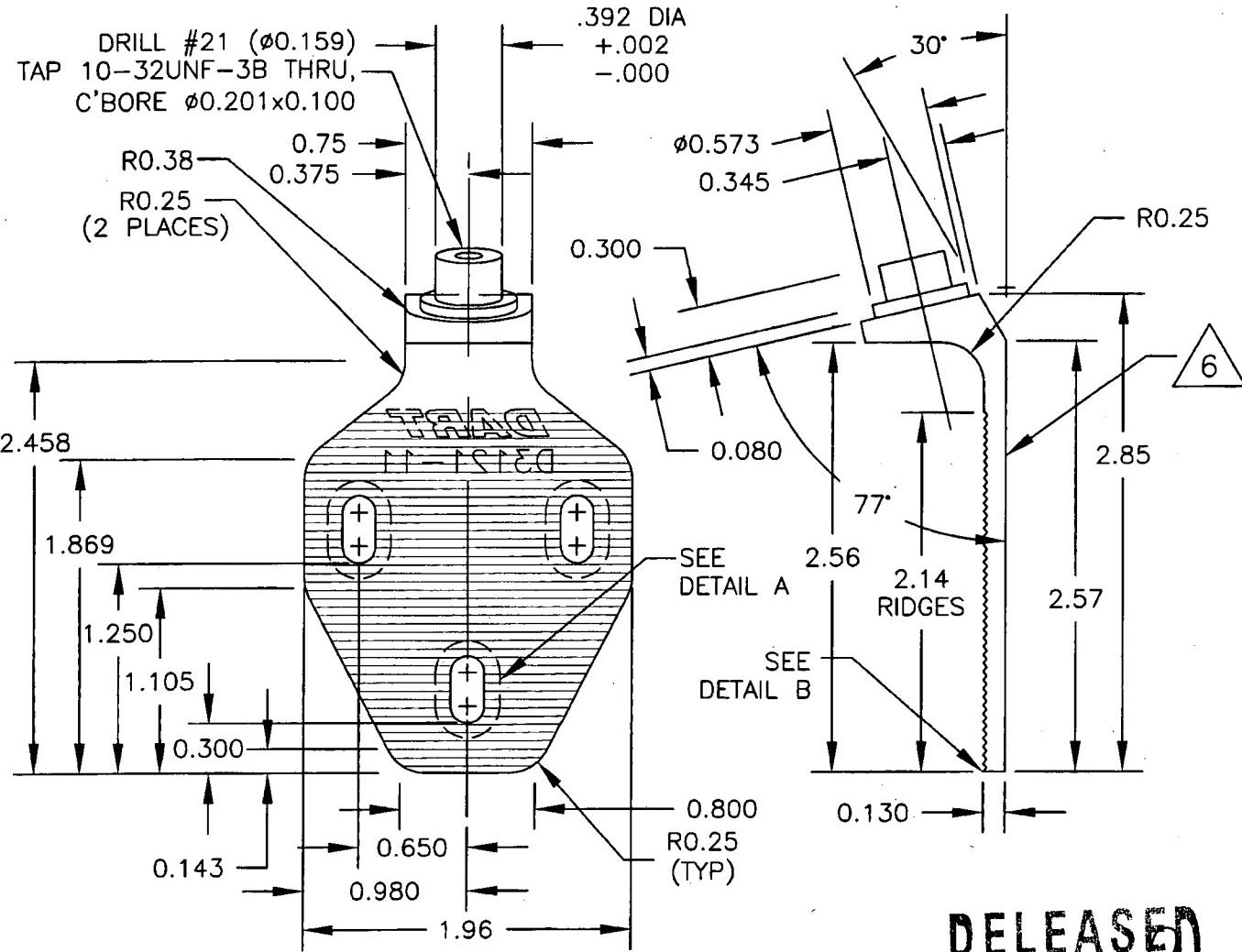
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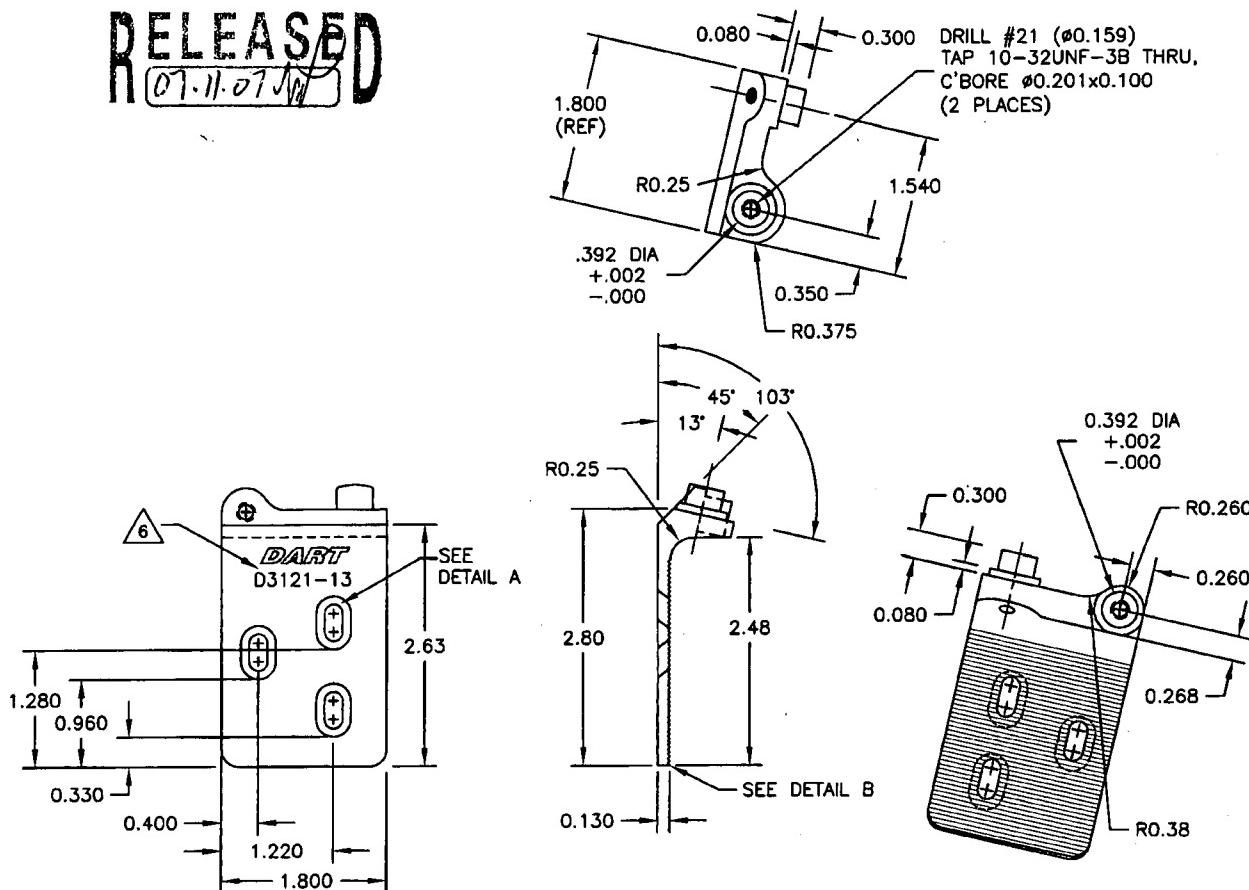
D3121-11 BRACKET

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
 - 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 3) ALL DIMENSIONS ARE IN INCHES
 - 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
 - 5) ENGRAVE DART P/N & LOGO AS SHOWN
 - 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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DATE 07.11.07	TITLE BRACKET ASSEMBLY	REV. E SHEET 5 OF 10 SCALE 1:2

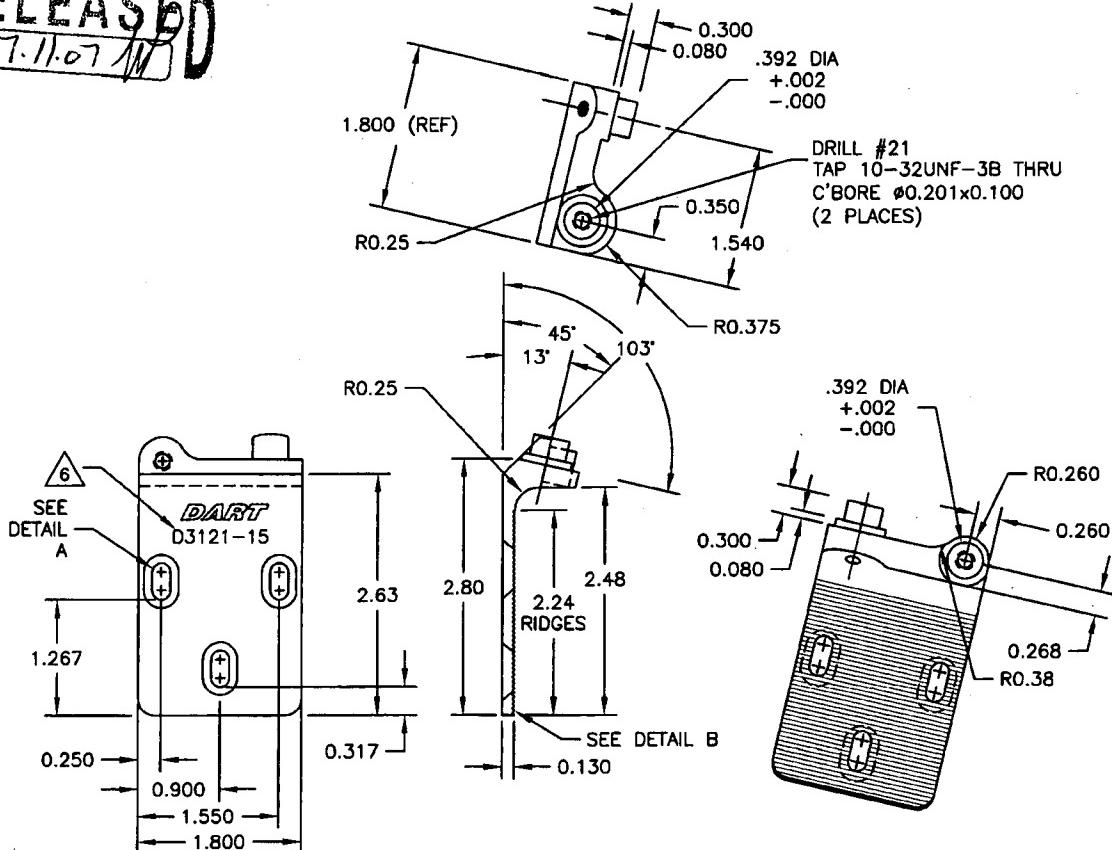
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(07.11.07)
**D3121-13 BRACKET (SHOWN)
D3121-14 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2

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D3121-15 BRACKET (SHOWN)
D3121-16 BRACKET (OPPOSITE)

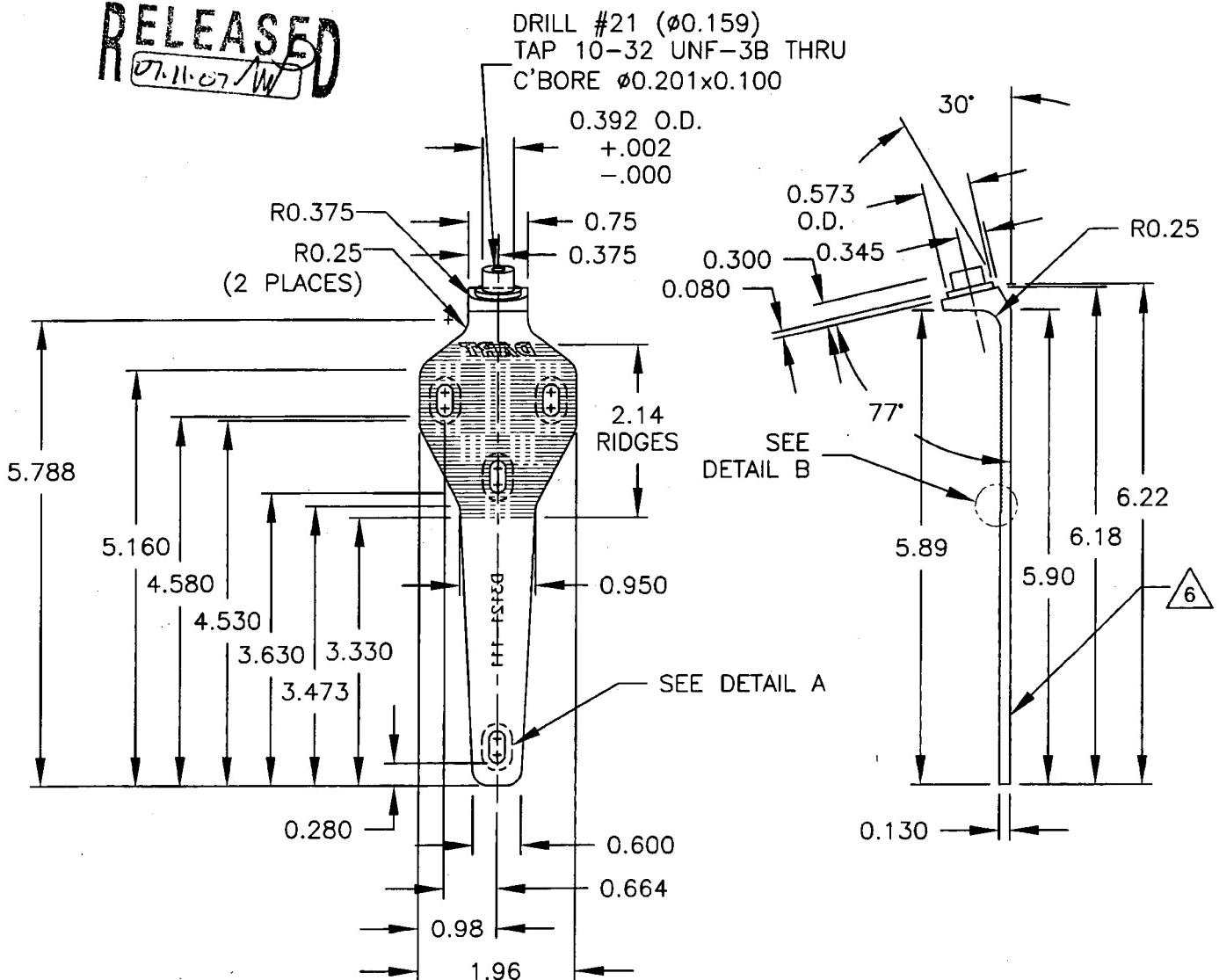
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
 MIN ULTIMATE TENSILE = 150 ksi
 MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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DATE 07.11.07	TITLE BRACKET ASSEMBLY		SCALE	1:2

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07.11.07 / W



D3121-111 BRACKET

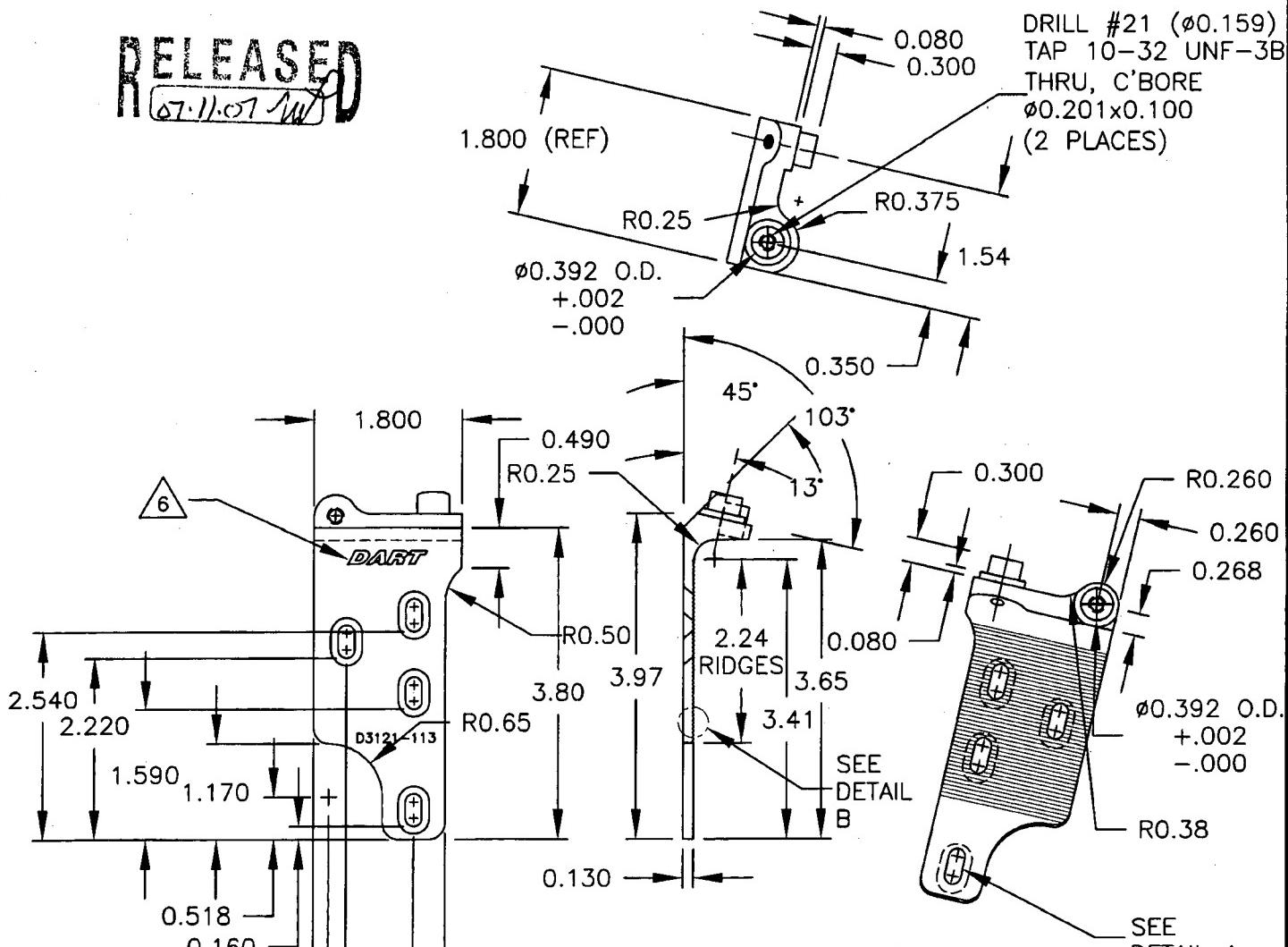
- 1) REPLACES PREMIER P/N B32-23001-11
 - 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) ALL DIMENSIONS ARE IN INCHES
 - 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
 - 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
 - 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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#	#	D3121	SHEET 8 OF 10
DATE	TITLE	SCALE	1:2
07.11.07	BRACKET ASSEMBLY		

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(07.11.07)



D3121-113 BRACKET (SHOWN)

D3121-114 BRACKET (OPPOSITE)

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13
D3121-114 REPLACES PREMIER P/N B32-23001-14
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS
OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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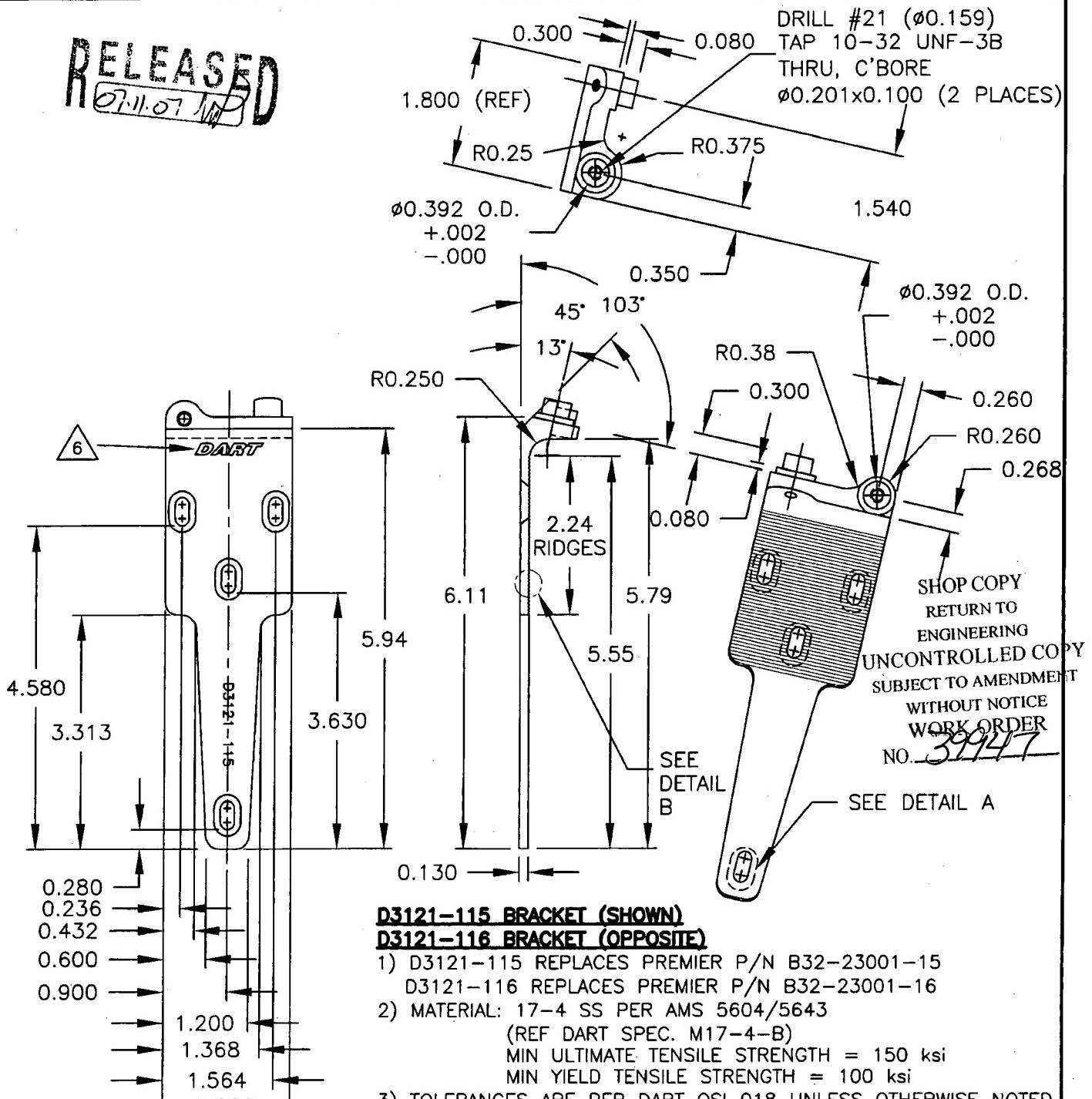
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DATE 07.11.07	TITLE BRACKET ASSEMBLY		SCALE 1:2

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D3121-115 BRACKET (SHOWN)
D3121-116 BRACKET (OPPOSITE)

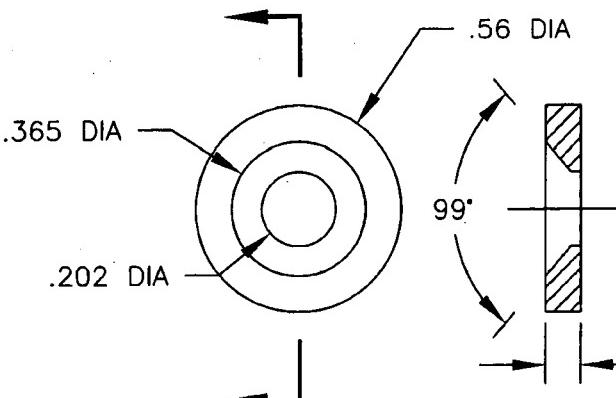
- 1) D3121-115 REPLACES PREMIER P/N B32-23001-15
D3121-116 REPLACES PREMIER P/N B32-23001-16
 - 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) ALL DIMENSIONS ARE IN INCHES
 - 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
 - 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
 - 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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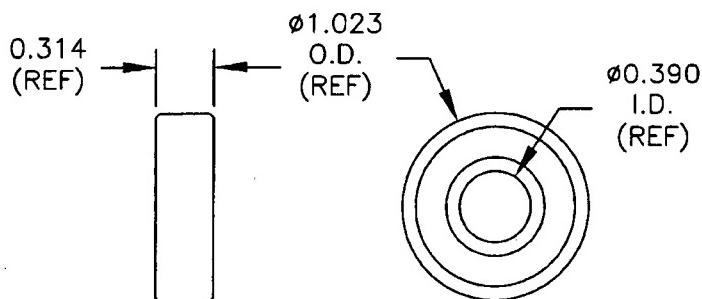
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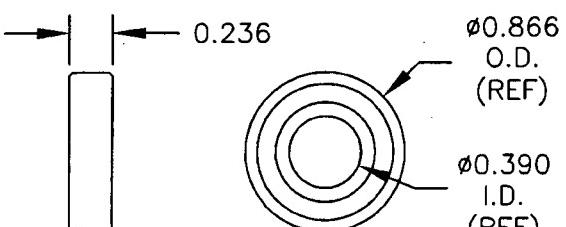
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DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:1

**D3121-17 WASHER (SCALE 2:1)**

- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

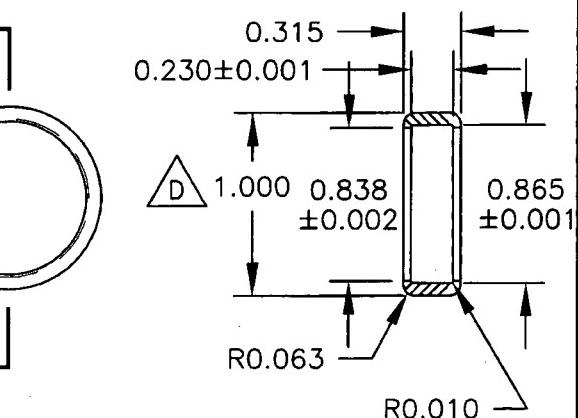
**D3121-19 BEARING (SCALE 1:1)**

- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM
FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

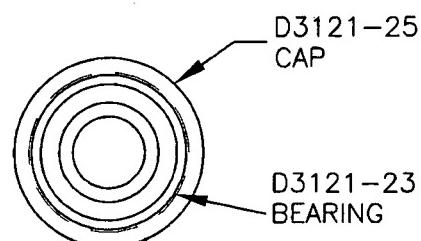
**D3121-23 BEARING (SCALE 1:1)**

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z
OR KML P/N 6900-2Z
- 2) ALL DIMENSIONS ARE IN INCHES

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**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, Ø1.25
(REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**